

In the Claims:

Please amend claims 1, 2, 9, 10 and 47-58 as indicated below.

1. (Currently amended) A distributed network search method, comprising:

receiving a query request from a consumer, wherein the query request includes a search query, wherein the query request is formatted according to a query routing protocol;

resolving the search query with an index of provider registrations to select one or more provider registrations;

routing the search query to at least one provider specified by the one or more selected provider registrations, wherein the search query is routed to the at least one provider according to the query routing protocol;

receiving a query response from said at least one provider, wherein the query response includes search results;

routing the search results to the consumer.

2. (Currently amended) The method as recited in claim 1, wherein ~~the query request and the query response are~~ is formatted according to [[a]] the query routing protocol, wherein the query routing protocol specifies a mark-up language format for communicating query requests and query responses.

3. (Original) The method as recited in claim 1, wherein said search query comprises:

an indication of a query-space, wherein the query-space defines a structure for indicating and matching search criteria; and

search criteria structured according to the indicated query-space.

4. (Original) The method as recited in claim 3, wherein each provider registration comprises:

an indication of a query-space, wherein the query-space defines a structure for indicating and matching search criteria;

a predicate statement structured according to the indicated query-space, wherein the predicate statement defines matching search criteria; and

a query server address to which matching search queries are to be directed.

5. (Original) The method as recited in claim 4, wherein said resolving comprises:

applying the search criteria from the search query to the provider registrations indicating the same query-space as the search query; and

selecting the provider registrations that have both the same query-space as said search query and a predicate statement matching the search criteria from the search query.

6. (Previously presented) The method as recited in claim 5, wherein said routing the search query to at least one provider specified by the one or more selected provider registrations comprises routing the search query to the query server addresses specified by the one or more of the provider registrations selected by said resolving.

7. (Original) The method as recited in claim 1, wherein said receiving a query response from at least one provider comprises collating search results received from a plurality of providers, and wherein said routing the search results comprises routing the collated search results to the consumer.

8. (Original) The method as recited in claim 1, further comprising:

receiving registration requests from a plurality of providers, wherein each registration request comprises a registration file, wherein the registration file comprises an address and a definition of search queries to be sent to the address; and

storing the registration files in the index of provider registrations.

9. (Currently amended) The method as recited in claim 8, wherein the registration requests, the query request and the query response are all formatted according to [[a]] the query routing protocol, wherein the query routing protocol specifies a mark-up language format for communicating query requests, query responses and registration requests.

10. (Currently amended) A network hub coupled to a network, comprising:

a router configured to receive query requests from consumers coupled to the network, wherein each query request includes a search query;

a resolver coupled to said router, wherein said resolver is configured to receive the search queries from said router, and wherein said resolver is further configured to access [[to]] a provider registration index and resolve each search query with the provider registration index to select one or more provider registrations for each search query;

wherein at least one of the one or more provider registrations is for a second network hub coupled to the network, wherein the second network hub is configured to route search queries to one or more providers indicated by the at least one of the one or more provider registrations; and

wherein said router is further configured to receive from said resolver an indication of one or more providers selected for each search query and route each search query to the one or more selected providers for that search query.

11. (Original) The network hub as recited in claim 10, wherein said router is further configured to receive query responses from providers coupled to the network, wherein each query response includes a search query ID and search results.

12. (Original) The network hub as recited in claim 11, wherein for each query request said router is further configured to collate the search results received from providers and route the collated search results to the consumer that sent the query request.

13. - 28. (Canceled)

29. (Previously presented) The method as recited in claim 2, wherein the markup language is eXtensible Markup Language (XML).

30. (Previously presented) The method as recited in claim 9, wherein the markup language is eXtensible Markup Language (XML).

31. (Previously presented) The method as recited in claim 1, wherein said receiving a query request from a consumer, said resolving the search query with an index of provider registrations, said routing the search query to at least one provider, said receiving a query response from said at least one provider, and said routing the search

results to the consumer implement deep search of said at least one provider on the distributed network.

32. (Previously presented) The method as recited in claim 1, wherein said receiving a query request from a consumer, said resolving the search query with an index of provider registrations, said routing the search query to at least one provider, said receiving a query response from said at least one provider, and said routing the search results to the consumer implement wide search of the distributed network.

33. (Previously presented) The method as recited in claim 1, wherein the search results include information in text format.

34. (Previously presented) The method as recited in claim 1, wherein the search results include information in audio format.

35. (Previously presented) The method as recited in claim 1, wherein the search results include information in video format.

36. (Previously presented) The method as recited in claim 1, wherein the search results include information in image format.

37. (Previously presented) The network hub as recited in claim 11, wherein the search results include one or more of text, audio, video and image information.

38. (Previously presented) The network hub as recited in claim 11, wherein the router is further configured to receive the query requests and query responses according to a query routing protocol, wherein the query routing protocol specifies a markup language format for communicating query requests and query responses.

39. (Previously presented) The network hub as recited in claim 38, wherein the markup language is eXtensible Markup Language (XML).

40. (Previously presented) The network hub as recited in claim 10, wherein each search query comprises:

an indication of a query-space, wherein the query-space defines a structure for indicating and matching search criteria; and

search criteria structured according to the indicated query-space.

41. (Previously presented) The network hub as recited in claim 40, wherein each provider registration comprises:

an indication of a query-space, wherein the query-space defines a structure for indicating and matching search criteria;

a predicate statement structured according to the indicated query-space, wherein the predicate statement defines matching search criteria; and

a query server address to which matching search queries are to be directed.

42. (Previously presented) The network hub as recited in claim 41, wherein for each search query said resolver is further configured to:

apply the search criteria from the search query to the provider registrations indicating the same query-space as the search query; and

select the provider registrations that have both the same query-space as said search query and a predicate statement matching the search criteria from the search query.

43. (Previously presented) The network hub as recited in claim 42, wherein said router is configured to route each search query to the query server addresses specified by one or more of the provider registrations selected by said resolver.

44. (Previously presented) The network hub as recited in claim 10, wherein said router is further configured to:

receive registration requests from a plurality of providers, wherein each registration request comprises a registration file, wherein the registration file comprises an address and a definition of search queries to be sent to the address; and

store the registration files in the index of provider registrations.

45. (Previously presented) The network hub as recited in claim 10, wherein the router is configured to receive the registration requests according to a query routing protocol, wherein the query routing protocol specifies a markup language format for communicating query requests, query responses and registration requests.

46. (Previously presented) The network hub as recited in claim 45, wherein the markup language is eXtensible Markup Language (XML).

47. (Currently amended) A ~~carrier tangible, computer-accessible~~ medium comprising program instructions, wherein the program instructions are computer-executable to implement:

receiving a query request from a consumer, wherein the query request includes a search query, wherein the query request is formatted according to a query routing protocol;

resolving the search query with an index of provider registrations to select one or more provider registrations;

routing the search query to at least one provider specified by the one or more selected provider registrations, wherein the search query is routed to the at least one provider according to the query routing protocol;

receiving a query response from said at least one provider, wherein the query response includes search results; and

routing the search results to the consumer.

48. (Currently amended) The ~~carrier tangible, computer-accessible~~ medium as recited in claim 47, wherein ~~the query request and the query response are is~~ formatted according to [[a]] the query routing protocol, wherein the query routing protocol specifies a markup language format for communicating query requests and query responses.

49. (Currently amended) The ~~carrier tangible, computer-accessible~~ medium as recited in claim 48, wherein the markup language is eXtensible Markup Language (XML).

50. (Currently amended) The ~~carrier tangible, computer-accessible~~ medium as recited in claim 47, wherein said search query comprises:

an indication of a query-space, wherein the query-space defines a structure for indicating and matching search criteria; and

search criteria structured according to the indicated query-space.

51. (Currently amended) The ~~carrier tangible, computer-accessible~~ medium as recited in claim 50, wherein each provider registration further comprises:

an indication of a query-space, wherein the query-space defines a structure for indicating and matching search criteria, and wherein the predicate statement is structured according to the indicated query-space; and

~~a predicate statement structured according to the indicated query-space, wherein the predicate statement defines matching search criteria; and~~

a query server address to which matching search queries are to be directed.

52. (Currently amended) The carrier tangible, computer-accessible medium as recited in claim 51, wherein said resolving comprises:

applying the search criteria from the search query to the provider registrations indicating the same query-space as the search query; and

selecting the provider registrations that have both the same query-space as said search query and a predicate statement matching the search criteria from the search query.

53. (Currently amended) The carrier tangible, computer-accessible medium as recited in claim 52, wherein said routing the search query to at least one provider specified by the one or more selected provider registrations comprises routing the search query to the query server addresses specified by the one or more of the provider registrations selected by said resolving.

54. (Currently amended) The carrier tangible, computer-accessible medium as recited in claim 47, wherein said receiving a query response from at least one provider comprises collating search results received from a plurality of providers, and wherein said routing the search results comprises routing the collated search results to the consumer.

55. (Currently amended) The ~~carrier~~ tangible, computer-accessible medium as recited in claim 47, wherein the program instructions are further computer-executable to implement:

receiving registration requests from a plurality of providers, wherein each registration request comprises a registration file, wherein the registration file comprises an address and a definition of search queries to be sent to the address; and

storing the registration files in the index of provider registrations.

56. (Currently amended) The ~~carrier~~ tangible, computer-accessible medium as recited in claim 55, wherein the registration requests, the query request and the query response are all formatted according to a query routing protocol, wherein the query routing protocol specifies a markup language format for communicating query requests, query responses and registration requests.

57. (Currently amended) The ~~carrier~~ tangible, computer-accessible medium as recited in claim 56, wherein the markup language is eXtensible Markup Language (XML).

58. (Currently amended) A network hub coupled to a network, comprising:

means for routing query requests received from consumers coupled to the network, wherein each query request includes a search query;

means for resolving the search queries, wherein said means for resolving are configured to:

receive the search queries from said means for routing;

access a provider registration index; and

resolve each search query with the provider registration index to select one or more provider registrations for each search query, wherein at least one of the one or more of the provider registrations is for a second network hub coupled to the network, wherein the second network hub comprises means to route search queries to one or more providers indicated by the at least one of the one or more provider registrations;

wherein said means for routing are further configured to:

receive from said means for resolving an indication of one or more providers selected for each search query; and

route each search query to the one or more selected providers for that search query.

59. (Previously presented) The network hub as recited in claim 58, wherein said means for routing are further configured to receive query responses from providers coupled to the network, wherein each query response includes a search query identifier and search results.

60. (Previously presented) The network hub as recited in claim 59, wherein the search results include one or more of text, audio, video and image information.

61. (Previously presented) The network hub as recited in claim 59, wherein said means for routing are further configured to receive the query requests and query responses according to a query routing protocol, wherein the query routing protocol

specifies a markup language format for communicating query requests and query responses.

62. (Previously presented) The network hub as recited in claim 61, wherein the markup language is eXtensible Markup Language (XML).

63. (Previously presented) The network hub as recited in claim 58, wherein each search query comprises:

an indication of a query-space, wherein the query-space defines a structure for indicating and matching search criteria; and

search criteria structured according to the indicated query-space.

64. (Previously presented) The network hub as recited in claim 63, wherein each provider registration comprises:

an indication of a query-space, wherein the query-space defines a structure for indicating and matching search criteria;

a predicate statement structured according to the indicated query-space, wherein the predicate statement defines matching search criteria; and

a query server address to which matching search queries are to be directed.

65. (Previously presented) The network hub as recited in claim 64, wherein for each search query said means for resolving are further configured to:

apply the search criteria from the search query to the provider registrations indicating the same query-space as the search query; and

select the provider registrations that have both the same query-space as said search query and a predicate statement matching the search criteria from the search query.

66. (Previously presented) The network hub as recited in claim 65, wherein said means for routing are further configured to route each search query to the query server addresses specified by one or more of the provider registrations selected by said means for resolving.

67. (Previously presented) The network hub as recited in claim 58, wherein said means for routing are further configured to:

receive registration requests from a plurality of providers, wherein each registration request comprises a registration file, wherein the registration file comprises an address and a definition of search queries to be sent to the address; and

store the registration files in the index of provider registrations.

68. (Previously presented) The network hub as recited in claim 58, wherein said means for routing are further configured to receive the registration requests according to a query routing protocol, wherein the query routing protocol specifies a markup language format for communicating query requests, query responses and registration requests.

69. (Previously presented) The network hub as recited in claim 68, wherein the markup language is eXtensible Markup Language (XML).